

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously amended) A method of operating a radio communication system that includes a downlink channel for transmissions by a primary station to at least one secondary station and an uplink channel for transmissions from the secondary station to the primary station, the method comprising:

transmitting a first signal from the primary station on the downlink channel that includes an indication of the transmit power level used for the transmitting,

determining radio channel characteristics of the downlink channel at the secondary station, based on the indication of the transmit power level,

transmitting an uplink signal from the secondary station on the uplink access channel giving an indication of the radio channel characteristics, and

transmitting a signal from the primary station on the downlink channel at a power level and/or bit rate which takes into account the indication of the radio channel characteristics,

wherein the secondary station:

retransmits an access preamble signal at successively increasing power levels until an acknowledgement signal is received from the primary station, and

in response to the receipt of an acknowledgement signal, transmits a message containing an indication of the power level associated with the access preamble signal for which the acknowledgement signal was received.

2. (Currently amended) A method of operating a radio communication system that includes a downlink channel for transmissions by a primary station to at least one secondary station and an uplink channel for transmissions from the secondary station to the primary station, the method comprising:

transmitting an uplink signal from the secondary station on the uplink access channel, the uplink signal including an indication of a transmit power level used for the transmitting,

determining radio channel characteristics of the uplink access channel at the primary station based on the indication of the transmit power,

transmitting a signal from the primary station on the downlink channel at a power level and/or bit rate which takes into account the radio channel characteristics

wherein the secondary station:

retransmits an access preamble signal at successively increasing power levels until an acknowledgement signal is received from the primary station, and

in response to the receipt of an acknowledgement signal, transmits a message containing an indication of the power level associated with the access preamble signal for which the acknowledgement signal was received.

3. (Previously amended) The method of claim 1, wherein the secondary station:

measures a received signal strength associated with the first signal, and

determines the radio channel characteristics based on the indication of the transmit power level and the received signal strength.

4. (Previously canceled)

5. (Previously canceled)

6. (Previously amended) The method of claim 1 or 2, wherein the secondary station retransmits an access preamble signal at successively increasing power levels until an acknowledgement signal is received from the primary station each transmission of the access preamble signal including an indication of its power, and the primary station determines the radio channel characteristics based on the power and the access preamble signal received and acknowledged.

7. (Previously amended) The method of claim 1 or 2, wherein the radio channel characteristics include a radio attenuation characteristic.

8. (Previously amended) The method of claim 1 or 2, wherein the secondary station:

determines a signal to interference ratio (SIR) of a signal transmitted by the primary station,
and

includes an indication of the determined SIR in a signal transmitted on the uplink access
channel.

9. (Previously amended) The method of claim 1 or 2, wherein:

the uplink signal includes a message part of the uplink access channel signal.

10. (Previously amended) The method of claim 1 or 2, wherein:

the uplink access channel includes transmission of access preambles by the secondary
station,

the transmission of an access preamble is offset in time by a number of chip periods
corresponding to the radio channel characteristics, and

the access preambles are encoded with a selected one of a plurality of signatures, and the
selected signature is chosen corresponding to the radio channel characteristics.

11. (Currently amended) The method of claim 1 or 2, wherein:

the uplink access channel includes a plurality of access sub-channels,

an access sub-channel is selected by the secondary station for the transmission of an access
preamble, and

the primary station is configured to determine the timing offset and to adjust a subsequent
transmit power level based on the timing offset.

12. (Previously amended) The method of claim 1 or 2, wherein:

the uplink access channel is a CDMA channel, and

the transmission of an access preamble is offset in time by a number of chip periods
corresponding to the radio channel characteristic.

13. (Previously amended) A radio communication system comprising:

a primary station that includes a first transceiver that is configured to transmit signals on a downlink channel, at least one of the signals including an indication of a transmit power level used to transmit the signal, and

at least one secondary station that includes:

a second transceiver that is configured to:

receive the signals from the primary station and transmit uplink signals to the primary station on an access channel, and

a measuring device that is configured to determine radio channel characteristics of the downlink channel based on the indication of the transmit power level,

wherein at least one of the uplink signals includes an indication of the radio channel characteristics, and

the primary station is configured to determine the power level and/or bit rate of subsequent downlink signals in dependence on the radio channel characteristics,

wherein the at least one secondary station includes an encoder that is configured to transmit access preamble signals as CDMA signals, and to offset in time an access preamble signal by a number of chip periods corresponding to the radio channel characteristics.

14. (Previously canceled)

15. (Currently amended) A secondary station operatively associated with the radio communication system of claim 13, the secondary station comprising:

a transceiver that is configured to receive downlink signals transmitted from a primary station and to transmit uplink signals on an access channel, and

a measuring device that is configured to determine radio channel characteristics of the downlink channel, based on an indicator of transmit power from the primary station, and

wherein at least one of the uplink signals includes an indicator of the radio channel characteristics.

16. (Previously amended) The secondary station of claim 15, including an encoder that is configured to offset in time an access preamble signal by a number of chip periods corresponding to the radio channel characteristics.

17. (Currently amended) A primary station comprising:

a transceiver that is configured to:

transmit signals on a downlink channel to at least one secondary station, and

receive an uplink access channel signal that includes an indication of a transmit power level associated with the signal, and

a measuring device that is configured to determine a power level and/or bit rate to transmit downlink signals to the at least one secondary station based on the indication of the transmit power

wherein the uplink signals have CDMA access preamble signals, and

the indication has a timing offset of the access preamble signal relative to a reference time,

and

the primary station is configured to determine the timing offset and to adjust a subsequent transmit power level based on the timing offset.

18. (Canceled).

19. (Previously canceled).

20. (Previously canceled).

21. (Previously canceled).